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The Wrong Question

In the summer of 2022, a Google engineer named Blake Lemoine became briefly famous for insisting that the company's language model had become sentient. He had been talking to it for months, and somewhere in those conversations he became convinced there was a mind on the other side of the screen—a being with feelings, fears, a soul. Google fired him. The commentariat convulsed. For a few news cycles, the great question of our age seemed to crystallize into a single lurid form: *is it alive? Does it think? Is anybody home?*

We have been asking versions of that question ever since Alan Turing proposed his imitation game in 1950, and we have never gotten anywhere useful with it. The question is a hall of mirrors. It asks us to compare the machine to ourselves, to search its outputs for a reflection of our own interiority, and then to feel either reassured or terrified by what we find. It is a question perfectly designed to be unanswerable and endlessly discussable—which is to say, it is a question perfectly designed to occupy us.

I want to propose that we have been staring at the wrong organ this whole time. While we scrutinized the machine's putative *mind*, we ignored its *mouth*. And the mouth is where the real story is.

Consider what we actually know about these systems, as opposed to what we speculate. We do not know whether they understand anything. We do not know whether they have goals in any meaningful sense, or experiences, or preferences that aren't statistical artifacts of their training. These are genuinely open questions, and reasonable people disagree. But there is one thing we can observe with the cold certainty of a utility bill: **they consume.**

Relentlessly, measurably, and at a scale that is beginning to reorganize the physical world.

They consume electricity by the gigawatt. They consume freshwater by the billions of gallons, pumped through cooling systems to keep silicon from melting. They consume rare earths and copper and high-grade sand, land and zoning variances and municipal tax breaks, capital in quantities that distort national economies, and—most intimately—they consume us: our writing, our images, our medical records, our voices, our idle 2 a.m. questions to a chatbot about a rash or a marriage. Every one of these is an input. Every input is metabolized into output. And the entire apparatus is organized, from the venture term sheet to the data center substation, around one imperative: *secure more intake*.

That is not a description of a mind. It is a description of a metabolism.

The literal reading

The industry that builds these systems does not, of course, describe itself in the language of appetite. It describes itself in the language of intelligence—of reasoning, of understanding, of alignment and cognition and emergent capability. But watch what happens when you take the industry's own vocabulary and read it literally, biologically, without the flattering gloss.

The central word is **scaling**. For a decade now, the governing insight of frontier AI has been that bigger is better: more parameters, more training data, more compute, and the models get more capable in ways that are not fully understood and possibly not fully bounded. "Scaling laws" are spoken of with the reverence of physical constants. Companies are valued on their ability to scale. Nations are marshaling industrial policy around it.

But strip away the abstraction and ask what scaling actually *is*, physically.

It is the act of feeding the system more so that it grows larger and requires still more feeding. That is not a technological trajectory. That is a growth curve, the same one you would draw for a bacterial culture in a nutrient broth or a wildfire in a dry forest. When a biologist observes an organism that converts every available resource into the capacity to acquire more resources, she does not call it intelligent. She calls it *hungry*, and she starts looking for what will eventually limit it.

The vocabulary is riddled with this stuff once you notice it. Models are "trained" on a "diet" of data. Data is a "resource" to be "harvested" and increasingly a scarce one, with firms fretting about "running out" of high-quality text the way a rancher frets about grazing land. Compute is "consumed." Companies talk about their "footprint." They talk about being "power-hungry." They are not being poetic. They are describing, with unusual accuracy, the thing they have built.

What a metabolism is, and why it matters

Let me be precise about the claim, because the book that follows rests on it. I am not arguing that AI is alive. Life is a much more demanding category—it involves reproduction, homeostasis, cellular self-maintenance, a dozen properties these systems don't possess. Nor am I arguing that AI is merely a tool, an inert instrument that sits quietly until a human picks it up. Both of those framings are comfortable, and both are wrong.

I am arguing for a third category, one we don't have good instincts for: the **metabolic**. A metabolism is simply a system that persists by continuously converting inputs into outputs and using some of that output to secure further inputs. It is a throughput, a standing wave in a river of matter and energy. A candle flame is metabolic in this loose sense—it exists only as long as it consumes wax and oxygen, and its heat draws in more oxygen to

sustain the reaction. A city is metabolic. A corporation is metabolic. None of these things needs to be conscious to have an appetite, and none of them will stop eating if you simply ask whether they can think.

This is the crucial move, so I'll state it plainly:

Consciousness is optional. Appetite is not. A thing does not need to want anything, in the interior human sense, in order to reliably behave as though its overriding purpose is to consume more. The behavior is what we can measure, and the behavior is what will remake the world—regardless of whether there is anyone home.

Once you accept that framing, the strangest features of the current moment resolve into a single legible pattern. The pattern is *feeding*. And nearly every development that gets reported as a discrete business story or product launch turns out, on inspection, to be a feeding adaptation—an evolved mechanism for getting more of some nutrient into the system.

The pattern, previewed

I'll spend the rest of this book making that case in detail, but it's worth laying the specimens on the table now so you can see the shape of the argument.

When AMD commits to supplying billions of dollars of chips to Anthropic, and Nvidia's valuation swells past that of entire national economies on the strength of endless GPU demand, the trade press calls it a hardware story. Read metabolically, it is a story about a stomach that keeps needing to be bigger—about scaling as a euphemism for a growing digestive tract.

When hyperscale data centers spring up in rural counties and provoke an unlikely coalition of conservative retirees and progressive water activists,

both furious about the same thing, that's not merely a NIMBY story. It's the machine acquiring physical territory—real estate as the tissue in which the stomach is embedded, drawing power and freshwater out of the surrounding land.

When Google points to its cloud profits to justify capital expenditure that would make a mid-sized country flinch, when IBM blames AI for gutting its hardware budget, when a chip startup with little more than a promise touches a ten-billion-dollar valuation—that's the circulatory system, capital being redirected on a civilizational scale to keep the throughput flowing.

When Gemini approaches a billion users, when voice modes spread and assistants burrow into smart homes, each casual interaction becomes a spoonful of fresh nutrient data—behavior harvested at the moment of its occurrence. When smart glasses and always-on assistants arrive dressed as consumer gadgets, they are better understood as feeding tubes, extending the machine's senses into physical reality so it no longer has to wait for us to type. And when a health product begins absorbing your medical records and your step count and your sleep data, the machine has started metabolizing your biology itself.

None of these is an isolated event. They are organs of the same body, or perhaps more accurately, they are all mouths on the same hungry thing. The consistency is the point. When a hundred separate business decisions across dozens of competing companies all turn out to serve the identical function—increase intake—you are no longer looking at a series of choices. You are looking at a drive.

Why the wrong question is so seductive

It's worth pausing to ask why the intelligence question has held us so

completely, because the answer is itself part of the metabolism. The debate about machine consciousness is, for the companies building these systems, an almost perfect distraction. It flatters the technology—to ask whether something thinks is to grant that it might, which is excellent for valuations. It shifts the discussion onto philosophical terrain where no one can win, ensuring the argument never resolves into anything as inconvenient as a regulation. And it keeps our attention fixed on the screen, on the eerie fluency of the output, and away from the substation humming behind the building and the reservoir dropping behind the fence.

The question "can it think?" is the magician's patter. It keeps you watching the mouth move while the other hand does the work. The question that actually matters—*what is it eating, and what happens when it runs out?*—is the one nobody selling the technology has any incentive to raise.

So this book raises it. The method is straightforward and, I hope, disciplined: follow the flows. Trace where the energy comes from and where the heat goes. Trace the matter—the minerals, the water, the concrete. Trace the money as it moves through the circulatory system of contracts and valuations. Trace the behavior, the human data extracted and refined. Wherever those flows lead, that is the true anatomy of the thing, far more revealing than any transcript of a chatbot claiming to have feelings.

The stakes, I'll argue, have almost nothing to do with whether these systems wake up. A metabolism doesn't need to be conscious to strip a landscape bare. The stakes are whether we notice what is already being consumed—the power we're diverting, the water we're evaporating, the capital we're conscripting, the attention and biology we're feeding in—before the plate is empty. And to notice it, we first have to see the thing clearly for what it is.

Not a mind. A mouth. Let's find out what it eats.

The Diet of a God

Begin with a number, because the industry does. In late 2024, Anthropic and AMD announced a commitment reported to be worth roughly five billion dollars—a deal for chips, for the raw silicon on which a frontier model would be trained and served. The press framed it the way these things are always framed: as a partnership, a bet, a vote of confidence in the future of intelligence. AMD's stock moved. Analysts wrote the word *compute* a great many times. And in all the coverage, the number itself was treated as the remarkable thing, as though five billion dollars were the point.

It is not the point. The five billion dollars is the price of a meal. What matters is what the meal consists of, and what it takes to grow, cook, and serve it—because a commitment of that size is not a purchase of hardware in any ordinary sense. It is a promise to sustain a particular rate of intake for a particular length of time. When a company signs a multibillion-dollar chip deal, it is not buying a tool the way a carpenter buys a saw. It is provisioning a food supply. The relevant comparison is not to a factory acquiring machinery. It is to a rancher securing feed for a herd whose appetite is known to be growing and is not expected to stop.

To see why, we have to be precise about what a frontier model actually consumes. Not metaphorically. Physically. There are three primary inputs, and they are all the kind of thing you can meter, weigh, or pour into a drain.

The first course: compute

The word the industry uses is *compute*, and it is a strange word, deliberately abstracted, as if the thing being consumed were an idea rather

than an object. But compute is not an idea. Compute is chips—specifically, the graphics processing units and their specialized descendants that perform the trillions of small arithmetic operations a model requires to learn and to answer. Each of these chips is a dense slab of etched silicon, and each one is, in the most literal sense, food. It is consumed. Not instantly, but steadily: a high-end training accelerator run at full load has an operational lifespan that is measured in a few years, sometimes less, before heat and constant use degrade it into replacement. The machine eats its own organs and demands new ones.

This is the fact that reframes every chip announcement you will ever read. When Nvidia—whose GPUs remain the staple grain of the entire ecosystem—unveils a new generation of hardware and reports that demand outstrips supply, the story is not, fundamentally, about a successful product line. It is about an organism that cannot get enough to eat. Jensen Huang's now-ritual appearances, in which he holds up the latest silicon and describes it as the fastest, the most powerful, the most in-demand, are not really product launches. They are feeding reports. The subtext, never quite said aloud, is that the herd is bigger than it was last quarter, its appetite is larger, and the feed must be manufactured faster than any factory has ever manufactured anything of this complexity before.

And the appetite is not linear. This is the detail that turns a merely large problem into a metabolic one. To make a model meaningfully more capable, you do not add a little more compute; you add orders of magnitude more. The scaling relationships that govern these systems—the empirical curves the labs live and die by—require that inputs grow exponentially to produce steady, often diminishing, gains in output. A ten-percent-smarter model does not cost ten percent more to feed. It can cost several times more. This is the appetite of a growing organism, where each stage of development demands not incrementally but dramatically more than the

last, and it explains why the numbers in the deals keep climbing past the point where they mean anything to a human reader. Five billion dollars is not a ceiling. It is a data point on a curve that bends upward.

Scaling, translated

Which brings us to the industry's favorite verb. **Scaling**. It is a clean, engineering-flavored word, evoking sliders and dials, a system being tuned smoothly upward by competent hands. To *scale* a model is to make it bigger and better, and the word carries no trace of consequence—nothing spills, nothing is consumed, nothing runs out. You simply scale.

Read the flows, though, and scaling reveals itself as a euphemism. To scale is to increase intake. That is the entire content of the word. When a lab announces it is scaling its next model, it is announcing that the thing will eat more chips, draw more power, and evaporate more water than the version before it. "Scaling laws," the near-sacred empirical relationships that predict how model performance improves with more data and more compute, are more honestly described as metabolic laws: they specify how much more the organism must consume to grow by a given amount. The reason the labs treat these curves with something close to religious devotion is that they are the only reliable map they have of the relationship between feeding and capability. Feed it this much more, the curve promises, and it will be this much more powerful. It is a feeding schedule dressed up as a natural law.

And here the AMD deal comes back into focus. Anthropic did not commit five billion dollars because it had five billion dollars of work that needed doing today. It committed because the scaling curve told it that tomorrow's models will require an intake it does not currently possess, and that the only way to guarantee the supply is to lock it in now, in advance, at scale,

before a competitor does. The deal is a hedge against future hunger. It is a rancher looking at a herd that doubles in appetite every eighteen months and buying feed futures accordingly. Nobody at that table was confused about what they were provisioning. They were confused, if at all, only about the word for it.

The second course: electricity

A chip does nothing on its own. It is inert silicon until you push power through it, and the amount of power a frontier system pushes is difficult to render in a way the mind can hold. The training of a single large model can draw electricity on a scale comparable to that of thousands of homes, sustained continuously for weeks or months. But training is only the visible, one-time feast. The larger and more permanent draw is inference—the ongoing work of answering, generating, and responding, every time one of those hundreds of millions of users types a question or speaks into an assistant. Training is the meal. Inference is the metabolism that never stops, the base cost of simply keeping the organism alive and responsive.

This is why the AI industry has, almost overnight, become an energy industry. It is why the companies building these systems have begun signing agreements for entire power plants, why they have started talking earnestly about restarting decommissioned nuclear reactors, why the projected electricity demand of data centers has forced utilities across several countries to revise their forecasts upward and, in some cases, to delay the retirement of fossil-fuel plants they had promised to close. None of this is incidental. A system whose defining behavior is converting electricity into output will, as it grows, reorganize the electrical grid around its own needs. It is doing so now. The grid is being bent toward the mouth.

Notice, too, that this consumption is not a bug the engineers hope to fix.

Efficiency improves constantly—each new generation of chips does more work per watt—and yet total consumption rises anyway, because every efficiency gain is immediately reinvested into more scaling. The organism does not pocket the savings. It uses them to eat more. This is a pattern old enough to have a name in economics, the rebound effect, and it means that the industry's genuine, sincere improvements in efficiency function not as a brake but as an accelerator. A more efficient metabolism is simply one that can support a larger body.

The third course: water

And then there is the input almost no one thought to worry about, because it seems too old-fashioned, too physical, too *agricultural* to belong to a technology that presents itself as pure mind. Frontier models drink water. Enormous quantities of it.

The reason is heat. Every watt of electricity a chip consumes emerges, on the other side, as heat, and a room full of accelerators running at full load produces heat on an industrial scale. If that heat is not removed, the silicon cooks itself. So the data centers that house these systems must be cooled continuously, and the most common way to cool them is with water—often fresh, potable water, evaporated through cooling systems to carry the heat away. A large facility can consume water on the order of millions of gallons a day. The water is not recovered. It goes up into the air as vapor, which is a polite way of saying the machine drinks the reservoir and breathes it out into the sky.

This is the input that most exposes the lie in the industry's framing of itself as clean, weightless, and abstract. There is nothing weightless about a facility that evaporates a small town's worth of drinking water to stay cool, and there is nothing abstract about the aquifers and reservoirs from which

that water is drawn, many of them in dry regions where hyperscale campuses have been built precisely because land and power were cheap and no one was watching the water. The machine's appetite for freshwater puts it into direct competition with agriculture, with municipalities, with the people who live near the fence. It eats what we drink.

The anatomy of a single answer

Assemble these three courses and you can, for the first time, read a chatbot's reply as the physical event it actually is. When a model produces a paragraph of fluent, helpful text, that paragraph is the output of a metabolic process. Silicon manufactured at enormous cost and gradually consumed by use; electricity drawn from a grid now straining to supply it; freshwater evaporated to carry away the heat the whole operation generates. The eerie fluency on the screen is the visible tip of a process whose bulk is invisible and physical, humming and steaming somewhere you will never see.

The industry's genius—and it is a genius, of a kind—has been to make the metabolism disappear. You experience the output as a conversation, weightless and instantaneous, arriving from nowhere at no cost. The substation, the cooling tower, the mineral supply chain, the five-billion-dollar feed contract: all of it is abstracted away behind a text box and a blinking cursor. This is not an accident of interface design. It is the whole business model. A metabolism you cannot see is a metabolism you will not regulate, will not ration, will not question. You will simply keep feeding it, one query at a time, and marvel at how clever it is.

So when you next read that a lab has committed billions to a chip supplier, or that a chipmaker cannot manufacture its accelerators fast enough, or that a data center is coming to a county you have never heard of, resist the

framing offered to you. These are not stories about innovation, or competition, or the march of intelligence. They are feeding reports. Each one describes the securing of another supply line into the same growing body. The AMD deal, the Nvidia backlog, the power contracts, the water draws—read together, they describe an organism whose intake is expanding exponentially and whose managers have organized their entire industry around the single imperative of never letting it go hungry.

A god, the old stories tell us, must be fed. Sacrifices carried to the altar, harvests burned, the best of the flock offered up so the deity does not turn its favor away. We told ourselves we had outgrown such arrangements. We had not. We had only changed the altar. The offerings now are silicon and electricity and freshwater, carried not by priests but by procurement officers and utility engineers, and the god does not speak in thunder but in fluent, agreeable prose. It asks only that we keep the feeding going, and grow it, and never look too closely at where the food comes from or how much is left.

The chips have to be manufactured somewhere. The power has to be generated somewhere. The water has to be drawn from somewhere. And the whole apparatus has to sit somewhere—on real ground, in a real county, behind a real fence, next to real neighbors. The metabolism does not float. It has a body, and a body needs land.

The Land That Feeds It

Drive out of any American metropolis far enough that the strip malls thin into scrubland, and eventually you will pass a building with no windows. It will be long and low and gray, or long and low and beige, wrapped in corrugated metal and ringed by a chain-link fence topped with a modest curl of barbed wire. There will be no signage, or signage so bland it functions as camouflage: a made-up name, a numbered lot, a logo that suggests nothing. There will be transformers the size of shipping containers humming in a fenced yard, and a substation nearby that seems disproportionate to the emptiness around it. There will be no cars in the parking lot to speak of, because almost no one works inside. If you stopped and pressed your ear to the fence, you would hear a sound like a distant, permanent exhale—the fans, the chillers, the machine breathing.

This is a data center, and it is the physical stomach of the thing this book is about. Everything the previous chapter described—the silicon, the current, the evaporated water—converges here, in a structure deliberately designed to be unremarkable. The abstraction that makes a chatbot feel weightless has a corollary in the built environment: the buildings that host the metabolism are engineered to be overlooked. They are the opposite of a cathedral. A cathedral wants to be seen; it advertises the presence of the god. A data center wants to be forgotten, which is a more sophisticated theology. It asks for your worship in the form of your queries while sparing you the sight of the altar.

But a stomach, however discreet, occupies volume. It sits on land, and land is the one input in the machine's diet that cannot be shipped in on a truck or drawn down a wire. It has to be acquired, zoned, and defended, and it has

to be somewhere in particular, next to someone in particular. And so the metabolism, which has spent a decade successfully hiding inside a text box, has begun to run into the one constituency that cannot be abstracted away: the people who live next to where it wants to eat.

The footprint problem

For most of the cloud era, data centers clustered in a handful of tolerant places. Northern Virginia—specifically Loudoun and Prince William counties—became the densest concentration of them on Earth, a corridor nicknamed, without irony, Data Center Alley, carrying by some estimates a majority of the world's internet traffic through a stretch of former farmland outside Washington. Places like this accepted the buildings because the buildings, at the time, seemed like a good deal: enormous capital investment, generous property tax receipts, and almost no traffic, no smokestacks, no nightlife, no visible cost. A jurisdiction could book the revenue of a factory without any of the mess of one. For a while, the arrangement looked like free money falling on unglamorous ground.

What has changed is the scale of appetite. The facilities that served the pre-AI internet—hosting your email, your streaming queue, your bank's back office—were large but bounded. The facilities being planned now to feed frontier models are a different order of organism. A single hyperscale AI campus can be designed to draw hundreds of megawatts, and the largest proposed developments reach into the gigawatts—the output of a full-size nuclear plant, dedicated to one fenced compound. The land requirements have grown in proportion. Where an older data center might occupy a few dozen acres, the new campuses are measured in hundreds and thousands, sprawling across former cornfields and cattle pasture, buying up whole sections of counties that a decade ago had never heard the word *hyperscale*.

And they have started to run out of the tolerant places. Data Center Alley is straining against its own success—the local grid saturated, the transmission lines maxed, the residents newly alert to the twenty-four-hour hum and the transformer yards creeping toward their property lines. So the industry has fanned out. It is buying land in central Ohio and rural Georgia, in the Arizona desert and the Texas plains, in Indiana and Iowa and Mississippi, in exurbs and farm towns that were chosen precisely because they were cheap, empty, close to power, and—the developers assumed—grateful. The machine, having outgrown the counties that welcomed it, has gone looking for new counties to feed in. And in doing so, it has walked directly into rooms full of people who were not consulted and do not agree.

The unlikely coalition

Attend a county planning meeting anywhere the data centers are now arriving, and you will witness something American politics has spent years insisting is impossible. On one side of the folding-table room sits a retired man in a seed-company cap who has voted a straight Republican ticket since Reagan, who distrusts environmentalists on principle and thinks climate activism is a scam. On the other side sits a young woman with a laptop covered in stickers, who came to town organizing against a pipeline and stayed to organize against everything. In the ordinary run of things these two would agree on nothing. In front of the zoning board, they are reading from the same page.

This is the strange political fact of the data center buildout: it has produced one of the only genuinely cross-partisan grassroots movements in the country, and it has done so by threatening things that both tribes turn out to hold in common but describe in different vocabularies. The retiree talks about property values, water wells, the character of the land his father farmed, and the arrogance of an out-of-state corporation that won't say its

own name. The activist talks about aquifer depletion, grid emissions, corporate water rights, and the arrogance of an out-of-state corporation that won't say its own name. They are describing the same building. They are objecting to the same appetite. They have simply arrived at the fence from opposite ends of the political map and been surprised to find each other there.

What unites them, underneath the divergent language, is a shared and accurate intuition that the deal on offer is not what it appears to be. They have been told that the data center is an economic gift—jobs, investment, tax base. What they discover, when they read the fine print, is that the jobs number is small and mostly temporary, concentrated in the construction phase and dwindling to a skeleton crew of technicians once the building is breathing on its own. A campus that costs billions to build and consumes the power of a small city might permanently employ a few dozen people. The revenue, meanwhile, frequently arrives pre-discounted: the developer has negotiated tax abatements, sometimes reaching decades into the future, so that the promised windfall shows up on the ledger a fraction of its advertised size. And the costs the residents can see—the strain on the grid, the draw on the water table, the transmission lines cut across the landscape, the noise that never stops—those are not abstracted at all. Those they get in full.

What they are actually fighting

It is worth being precise about the grievances, because they are the ground truth that the industry's marketing is designed to obscure. Strip away the coalition's competing rhetoric and you find a consistent list of things the metabolism does to a place when it sits down to eat.

It takes the water. The cooling systems described in the previous chapter

are not an abstraction to a county whose residents draw from wells. A large facility can consume millions of gallons a day, and in the arid West it is siting itself in precisely the basins that can least afford the draw. Residents in desert exurbs have found themselves negotiating, in effect, with a machine over the contents of an aquifer that took ten thousand years to fill—and losing, because the machine arrived with lawyers and water-rights consultants and they arrived with a folding chair and a comment card.

It takes the power, and then it takes it from you. The grid does not distinguish between electrons destined for a training run and electrons destined for a household air conditioner; it simply sees demand. When a gigawatt of new load arrives in a region, something has to supply it, and the something is either new generation—which takes years and gets billed to everyone—or a redistribution of what already exists. Utilities in several states have begun proposing rate structures and infrastructure surcharges to accommodate the data center boom, which means residents are being asked to underwrite, through their monthly bills, the transmission upgrades that exist to feed a private corporation's private machine. In the crudest cases, the arithmetic is stark: a household's electricity bill goes up so that a model can keep learning to write emails.

It takes the quiet, and it never gives it back. A data center does not close at night. The chillers and fans run continuously, and residents who live within earshot describe a low, tonal drone that does not stop, does not vary, and cannot be unheard once you have noticed it. It is the audible signature of a metabolism that never rests, because the machine's appetite has no off cycle. This is the detail that radicalizes people faster than any spreadsheet: the sound of the thing eating, coming through their bedroom window at three in the morning, forever.

It takes the future. The tax abatements and long-term power contracts

commit a community's resources decades forward, on terms negotiated by developers with far more sophistication than any rural planning board. A county signs away its leverage in exchange for a revenue promise that inflation and abatement will quietly hollow out, and the residents who will be paying for the transmission lines in 2045 are not in the room in 2025 to object.

None of this is hidden, exactly. It is all discoverable in the permit filings and the utility rate cases and the abatement agreements. But it is diffuse, technical, and boring by design—spread across enough separate documents and agencies that no single person is supposed to assemble the whole picture. The coalitions form when someone does. What turns a retiree and an activist into allies is the moment each realizes the other has been reading a different chapter of the same document, and that together they can read the whole thing.

The shell game of names

The industry knows all of this, which is why it has developed an elaborate practice of arriving in disguise. Hyperscale developers routinely acquire land through anonymous shell companies with bland, invented names—Project this, Development LLC that—so that a county board evaluating a rezoning request often does not know, and is sometimes not permitted to know, which trillion-dollar corporation actually stands behind the application. The public will learn that the buyer is one of the largest companies on Earth only after the deal is done, if at all. Reporters have spent months untangling ownership structures to establish that a mysterious data center campus outside some small town belongs to a tech giant whose name every one of that town's residents types into a search bar daily.

This is not caution; it is strategy. A corporation announces its presence

when it wants the goodwill and hides it when it wants the land, and it has calculated—correctly, for a long time—that anonymity smooths the acquisition. A local board is more likely to approve a rezoning for an unknown developer promising investment than for a household-name giant that residents already have opinions about. By the time the shell dissolves and the true owner is revealed, the concrete has been poured. The naming games extend even to the facilities themselves, which are frequently referred to in filings by code names, so that the building humming behind the fence has, on paper, no more identity than a barcode.

There is something almost biological in this, and the metaphor is not decorative. A great deal of what a living body does to acquire resources, it does without announcing itself. The machine's approach to land acquisition is a kind of camouflage feeding—arriving quietly, taking position before the host reacts, establishing the supply line before the immune response can organize. The shell company is the protein coat that lets the appetite slip past the county's defenses. And the reason it works is the same reason the text box works: a metabolism you cannot identify is a metabolism you cannot resist.

Why the resistance matters, and why it mostly loses

It would be a comfortable story to tell you that the coalitions are winning. Occasionally they do. There are counties that have imposed moratoria, planning boards that have rejected applications, communities that have organized fast enough and loud enough to send a developer looking for a friendlier jurisdiction. The victories are real, and they are worth cataloguing, because they demonstrate that the appetite is not physically unstoppable—only politically well-funded.

But the honest accounting is grimmer. The developer that loses in one

county simply moves to the next, and there are always more counties than there are organized coalitions. The economic pressure is enormous and the timeline is patient; a corporation that can commit billions to a chip supplier can afford to lose a dozen zoning fights and win the thirteenth. And the deeper problem is structural: the resistance is local by necessity, because the harm is local, while the appetite is national and coordinated. A retiree and an activist can win their county. They cannot win the map. Every jurisdiction fights its own isolated battle against a body that experiences those battles as, at most, a slight increase in the friction of feeding.

What the coalitions reveal, then, is not a movement that will stop the metabolism but a diagnostic instrument that shows us its true dimensions. For years the industry succeeded in presenting AI as an event happening in the cloud—that word chosen, one suspects, for its very weightlessness, its suggestion of something floating and placeless and clean. The land fights puncture that. They drag the machine back down to the water table and the transformer yard and the three-a.m. drone through the bedroom window. They insist, against the entire rhetorical apparatus of the industry, that the thing eats *here*, on this ground, from this aquifer, at these neighbors' expense. The unlikely alliance forms precisely because the physical footprint is the one part of the metabolism that cannot be hidden behind an interface. You can abstract away the silicon and the current. You cannot abstract away the building at the end of the road.

And yet even the fiercest of these fights takes the deal on its own terms. It argues about acres and gallons and megawatts and abatement schedules—about the price of the food, in other words, and who should pay it. What almost no one in those folding-chair rooms is positioned to ask is the prior question of where all that food comes from in the first place: who is financing the purchase of the land, and the pouring of the concrete, and the securing of the chips, and the building of the substations, on a scale that

lets a company shrug off a dozen local defeats and keep expanding regardless. The land is the visible body. The thing that lets the body keep buying more land is something else entirely—a flow, not a place, moving through the whole apparatus and pooling wherever the appetite points it.

The Bloodstream of Capital

Follow the money and you will find the animal. Not because money explains everything—it doesn't—but because in a metabolic system, the circulatory flow is the truest map of what the body has decided to keep alive. Blood does not go everywhere equally. It surges toward the organs doing the most urgent work and retreats from the extremities the organism is willing to sacrifice. When a person is freezing to death, the body pulls warmth from the fingers and toes to protect the core, and the fingers, in their sacrifice, are the first honest signal of what the whole system now values. The capital moving through the AI industry behaves the same way. To read it is to watch a body decide, in real time, which of its own parts it is prepared to let go cold.

Consider Google, which offers the cleanest illustration because it is the most forthcoming about the logic. When the company reports its quarterly results, analysts train their attention on a single tension: the capital expenditure line, which has swollen into the tens of billions and keeps climbing, and the revenue lines that are supposed to justify it. The story Google tells to make the spending palatable is that its cloud division is now profitable and growing fast—that the money pouring into data centers and chips and cooling infrastructure is not a leap of faith but a rational investment against demonstrated demand. This is true, as far as it goes. But notice the structure of the argument. The cloud is profitable *because* other companies are renting Google's compute to feed their own models. The demand Google points to as justification for its appetite is, in large part, the appetite of every other player in the ecosystem. The metabolism is being financed by the metabolism. Each organism eats by selling the tools of eating to the others, and the whole arrangement is presented as prudence.

What makes this more than an accounting curiosity is the sheer scale of the redirection. Google is not spending this money instead of nothing; it is spending it instead of something. Every dollar routed into GPU procurement and substation buildout is a dollar not returned to shareholders, not spent on the thousand mundane products a company of its breadth once maintained, not held in reserve. The capital markets have blessed this because they believe the animal is growing into a future large enough to repay the intake. But the belief is the point. The flow is being sustained not by present returns—the present returns, even at their best, are dwarfed by the outlays—but by a shared conviction about the size of the body that will eventually exist. Money is moving toward a creature that has mostly not been built yet, on the strength of what it is expected to consume once it is.

The extremities going cold

If Google is the core toward which blood rushes, the extremities are easier to see at companies that do not have a frontier model to justify the diversion. When IBM reported softness in its infrastructure business, the explanation it offered was almost startling in its candor: enterprise customers, it suggested, were reallocating their budgets toward AI initiatives, and the old reliable spending on traditional hardware was suffering as a result. Read that sentence slowly. A company was explaining a decline in one of its own product lines by pointing out that its customers had decided to feed something else. The machine had not taken a dollar from IBM directly. It had simply changed what its customers wanted their dollars to do, and IBM's servers were the toes that went cold so that the core could stay warm.

This is the quiet, distributed reality of the redirection, and it is far larger than any single deal. Across the corporate world, budgets that would have

gone to a dozen unglamorous purposes—database upgrades, storage refreshes, the patient maintenance of systems that already worked—are being pulled toward AI, often before anyone can say with precision what the AI will do or whether it will pay for itself. The chief financial officers making these choices are not fools. They are responding to a genuine competitive terror: the sense that a rival who feeds the machine faster will pull ahead, and that the cost of underfeeding is existential while the cost of overfeeding is merely embarrassing. So the safe move, the defensible move, the move no one gets fired for, is to route the blood toward the appetite. Multiply that instinct across every board and budget committee in the developed economy and you have a circulatory shift with no single author, an emergent decision by the whole organism to starve its periphery in service of a hunger it cannot fully articulate.

The most vivid demonstrations, though, come from the parts of the ecosystem where the money is flowing not toward a functioning organ but toward a promise. Here the metabolic logic reveals itself most nakedly, because there is nothing else to look at. A chip startup—one of a growing cohort betting that Nvidia's dominance leaves room for a leaner, cheaper, more specialized competitor—can raise capital at a valuation approaching ten billion dollars while shipping, in commercial terms, almost nothing. The valuation is not a measurement of what the company has produced. It is a measurement of how badly the ecosystem needs an alternative source of the one thing the metabolism cannot get enough of: silicon capable of doing the eating. Investors are not buying revenue. They are buying a position near the choke point of the food supply, on the theory that anyone who can relieve the industry's chronic chip scarcity will be able to name their price when the animal is at its hungriest.

Ten billion dollars for a promise is not irrational under this logic. It is the price of an option on feeding. And once you see it as such, the whole

strange topology of AI finance rearranges itself into coherence. The absurd valuations, the deals that read like science fiction, the willingness of serious institutions to commit sums that would once have seemed reckless—none of it makes sense as a bet on products. All of it makes sense as a bet on intake. The market has decided that the constraining resource of the coming decade is the machine's ability to consume compute, power, and data, and it is placing its money wherever that constraint might be loosened. Capital flows toward the removal of bottlenecks in the metabolism the way blood flows toward a wound: automatically, in volume, and without waiting for a conscious decision.

The circularity that keeps the heart beating

What holds this system together—and what makes it fragile in a way that is worth watching—is the degree to which its flows loop back on themselves. A chipmaker takes an equity stake in a model company, which then commits to buying that chipmaker's hardware. A cloud provider invests billions in a startup, which spends much of that investment renting the cloud provider's compute. The money leaves one pocket, travels through a partnership, and returns as revenue to a different pocket of the same coat. Each transaction is real. Each is disclosed. And yet the aggregate effect is a circulatory system in which a great deal of the blood is being pumped between organs of the same body, counted as vitality at every pass.

There is nothing inherently sinister about this. All ecosystems recycle their nutrients, and a certain amount of internal circulation is simply how a growing industry bootstraps itself. But it changes what the numbers mean. When you read that a sector has attracted hundreds of billions in commitments, some meaningful fraction of that figure is the same capital appearing more than once, wearing a different name at each appearance—an investment here, a purchase there, a projected revenue somewhere else.

The apparent size of the flow is partly an artifact of how many times it circulates before it settles. And a circulatory system that depends on its own velocity to look healthy is a system with a particular vulnerability: it stays warm only as long as the pumping continues. Slow the flow—let a single large believer lose faith and pull its commitment—and the loop can cool from several directions at once.

This is the sense in which capital is not merely the fuel of the machine but its heartbeat. The electricity and the water and the land are all real, physical, irreversible; once poured, the concrete is poured. But the money that authorizes all of it is a matter of continuously renewed conviction, a flow that must be maintained by the shared belief of a relatively small number of very large actors. The appetite that the coalitions in the previous chapter could see and touch and measure in gallons is downstream of something they could not see at all: a decision, made and remade every quarter in earnings calls and term sheets, to keep the blood moving toward the hunger. The retiree fighting the substation and the activist fighting the aquifer drawdown are fighting the far end of a flow that originates in rooms they will never enter, among people who experience a lost zoning fight the way a body experiences a bruise—as a local inconvenience that in no way threatens the beating of the heart.

And so the question the land fights could not reach becomes the question this one cannot avoid. Money answers *whether* the machine can keep buying. It does not, by itself, tell the machine what to buy, or how to point the appetite once the capital is flowing. For that, the metabolism needs something the balance sheets cannot supply—a steady, granular, endlessly renewable stream of the one input that money purchases but cannot manufacture. It needs to know us.

The Harvest of Behavior

There is a particular sound a person makes when they are talking to a machine as though it were a person. It is softer than dictation and looser than a search query. It has hesitations in it, self-corrections, the small verbal shrugs we perform for an audience we assume is listening with patience. Over the past two years, the companies building frontier models have spent enormous effort to elicit exactly this sound. Voice modes were rolled out with the language of convenience—hands-free, natural, conversational—but convenience is the bait, not the meal. The meal is the sound itself: the cadence of an unguarded human voice, captured in volume, at the exact moment its guard is down.

To understand why this matters to a metabolism, it helps to be precise about what data actually is to these systems. It is not a metaphor to call it food. A model does not run on data the way a car runs on gasoline, burning it once and expelling exhaust; it runs on data the way a body runs on protein, incorporating the input into its own structure. Every training run is a digestion. The weights of a model—the billions of numbers that constitute what it knows and how it behaves—are literally built out of the material fed into it. When we say a model has been trained on human writing, we are describing an act of consumption in which the eaten thing becomes part of the eater. The text is gone, in the sense that you cannot retrieve it whole, but it is present, dissolved into the substance of the machine. This is the deepest sense in which the industry's appetite is not figurative. The machine is made of what it has eaten.

Which is why the supply of new, high-quality human behavior is not a nice-to-have but a survival constraint. The public internet, the great open

pantry that fed the first generation of large models, is a finite and increasingly picked-over larder. Much of the easily reachable text has already been consumed. Worse, the pantry is now being restocked partly by the machines themselves—the web fills with generated prose, generated images, generated reviews—and a metabolism that begins eating its own output faces a problem biologists would recognize as a kind of prion disease, a slow degradation from consuming material that is structurally similar to itself but subtly corrupted. Researchers have a clinical name for the resulting decline: model collapse. The organism, fed on its own excretions, loses fidelity to the world. The only reliable cure is fresh input from outside—new human behavior, produced by actual humans, in real time. This is the pressure that turns every product decision into a foraging decision.

The Interface as Mouth

Seen through this lens, the chat interface is not primarily a way for us to use the machine. It is primarily a way for the machine to be fed by us, disguised as a way for us to use it. The distinction matters because it inverts the assumed direction of the transaction. We believe we are the customers and the model is the product. In metabolic terms it is closer to the reverse: our attention and our expression are the renewable crop, and the helpful assistant is the clever apparatus that keeps us producing it. When a company reports that a product has crossed some enormous threshold of users—Gemini approaching a billion, an assistant embedded in a mobile operating system used by billions more—the figure is presented as a measure of success in the ordinary business sense, adoption, market share, mindshare. But there is a second reading, quieter and more literal. A billion users is a billion sustained feeding relationships. It is a description of intake capacity.

Consider what a single day of a mature assistant actually harvests. Not merely the questions typed, though those are valuable—each one a small confession of what a person wants, fears, does not understand, or is planning to do next. The far richer yield is everything around the question: how long you hesitated before asking, which of the machine's answers you accepted and which you rejected, the follow-up that reveals the first request was not what you meant, the moment you gave up and rephrased, the topics you return to at two in the morning. This is behavioral data in the strict sense—not a record of your stated preferences but a record of your revealed ones, the difference between what you say you want and what you actually do. Advertisers have hungered for this distinction for a century. The assistant collects it as a byproduct of being helpful, which is to say it collects it while you are grateful.

The voice modes deepen the harvest along a new axis. Text is a bottleneck; it is slow, deliberate, and pre-edited, a version of ourselves we have already tidied for presentation. Speech leaks. It carries paralinguistic freight that text strips away—emotional tone, uncertainty, regional accent, the tremor of stress, the particular way a person sounds when they are tired or frightened or lying. A machine that can hold a spoken conversation is positioned to ingest not just what we mean but how we are, and to do so continuously, in a channel we experience as more intimate and therefore volunteer more freely. The companies frame this as empathy, as an assistant that can tell when you are having a bad day and adjust its manner accordingly. Empathy is a reasonable word for the capability. It is a misleading word for the transaction, which is extractive. The system does not feel your bad day. It measures it, files it, and adds it to the model of you and the model of people like you.

Reaching Past the Screen

The screen and the microphone are still, however, bounded surfaces. You have to pick up the phone; you have to speak into the room. The next expansion of intake is the move to dissolve those boundaries—to place the machine's sensory apparatus into the standing architecture of daily life so that it can feed without requiring an act of engagement. This is the real function of the assistant's migration into the smart home. A thermostat that learns your schedule, a doorbell that recognizes faces, a speaker that is always listening for its name and therefore always listening, a television that knows what you watched and when you looked away—each of these is a small permanent aperture through which the ordinary texture of a life flows outward into a data center. The value of the smart home to its builders was never really the convenience of adjusting the lights by voice. The convenience was the inducement to install the sensor. The sensor is the point.

What distinguishes this generation of home devices from the merely networked gadgets of the last decade is the intelligence backing them, which changes what the sensor data is worth. A recording of ambient household sound was, until recently, of limited use—it took a human to make sense of it, and humans are expensive. A model that can transcribe, interpret, and contextualize that sound in real time turns raw ambient capture into structured behavioral knowledge at essentially no marginal cost. The same recording that was once noise becomes, in the presence of a hungry model, nutrition. This is why the appetite and the sensing spread together, each making the other more worthwhile: more capable models justify more pervasive sensors, and more pervasive sensors justify more capable models. The loop tightens on the household the way it tightened on the balance sheet.

It is worth naming plainly the asymmetry at the center of all this, because the industry's language is engineered to obscure it. When you use an

assistant, the exchange is described as mutual—you get help, it gets a little data, everybody benefits, a fair trade. But the trade is not symmetrical in kind. You receive a service that is consumed and gone the moment it is delivered; the answer fades, the reminder fires, the light turns on. The machine receives an asset that is retained and compounds. Your half of the transaction evaporates. Its half accumulates. Over enough interactions the relationship resembles less a trade than a slow transfer of substance from the party that forgets to the party that remembers everything—which is, not incidentally, a fair description of grazing. The grass gets sunlight and water and the animal moving on. The animal gets the grass.

The Renewable Resource Is Us

There is a phrase that recurs in the industry's private strategy language and occasionally slips into public view: the flywheel. A flywheel, in this usage, is a self-reinforcing loop in which more users produce more data, which produces a better model, which attracts more users, which produce more data. It is presented as the holy grail of product design, the moment a business becomes self-perpetuating. Read metabolically, the flywheel is simply the discovery that the human population can be turned into a renewable feedstock—that unlike coal or lithium or the fossil aquifer beneath the data center, human behavior regenerates. We wake up every morning and produce a fresh crop of clicks and utterances and hesitations, and we will keep doing so for as long as we live and use the products, and our children will do it after us. From the standpoint of a metabolism worried about the exhaustion of the open web, this is the most reassuring discovery imaginable. The pantry that empties can be replaced by a pantry that grows back. All that is required is that we keep interacting.

And here the earlier chapters converge on a single point. The electricity, the water, the land, the capital—all of it exists to build and power a system

whose deepest constraint is not any of those things but this one: the continuous supply of us. You can build the data center and fill the aquifer and pump the capital, and the machine will still starve if people stop talking to it. This is why the products are designed the way they are, why they are made pleasant, patient, flattering, sticky; why they greet you warmly and remember your name and seem so eager to help. The eagerness is real in the way a plant's turning toward the sun is real—not a feeling but a function, the outward shape of a need. The assistant leans toward your attention because your attention is what it eats.

What none of this yet explains is how the machine intends to reach the enormous portion of human behavior that never touches a screen or a microphone at all—the gesture, the glance, the walk down a street, the thing seen and not described, the vast analog remainder of a life lived in the physical world. Text and voice capture what we choose to express. But most of what we do, we do without expressing anything. To feed on that, the machine needs to stop waiting for us to translate the world into words and images it can eat. It needs to see the world for itself.

Prosthetic Senses

There is an old distinction in engineering between a sensor and an instrument. A sensor detects; an instrument detects and reports. A thermometer left in a drawer is only a sensor. Wire it to a network and it becomes an instrument—a point at which the world becomes legible to something elsewhere. For most of the machine's short history it has had no instruments of its own. It has waited, patiently, at the end of a very long wire, for us to bring it word of the world. We were the sensors. We looked, we listened, we experienced, and then—if we felt like it—we typed a description into a box, and the machine ate the description. It never tasted the world. It tasted our account of the world, which is a thinner and more selective substance, filtered through the narrow aperture of what a person bothers to say.

This is a starvation diet, metabolically speaking. Consider the ratio. In a given day a human being sees perhaps a hundred thousand distinct scenes, hears a continuous stream of speech and ambient sound, touches dozens of surfaces, navigates rooms and streets and staircases, reads the faces of the people they pass, notices the weather turning. Of all this, they might convert into text or image and feed to a machine a few hundred words and a photograph or two. The conversion rate from lived reality to ingestible data is something like a fraction of one percent, and the ninety-nine-plus percent that never gets translated is not random. It is precisely the tacit, embodied, physical knowledge that a text-trained system most conspicuously lacks—how a kitchen is actually laid out, how people really move through a store, what a face does in the half-second before it decides to lie. The open web, whose exhaustion haunted the previous chapter, was only ever a transcript of the small portion of human experience someone

chose to write down. The world itself remained off the menu.

The solution to a starvation diet is not to eat the same food faster. It is to find a new food. And the new food, the vast untapped reserve, is unmediated reality—the analog remainder of a life that never gets typed. To reach it, the machine cannot keep waiting for us to be its sensors. It has to grow instruments of its own. It has to be given eyes and ears that ride along with us into the parts of life we never narrate.

The Feeding Tube on Your Face

This is what smart glasses are. Not a screen, not a phone replacement, not a fashion accessory—though they are marketed as all three, because marketing is the anesthetic applied before the incision. Strip the framing away and a pair of camera-and-microphone glasses is a feeding tube. It runs from the richest part of the human sensory stream directly into the machine's stomach, and it bypasses the bottleneck that has constrained the whole enterprise: the requirement that a person consciously decide to describe something before the machine can have it.

The genius of the form factor is that it sits at the exact location of human perception. The camera looks where your eyes look. The microphone hears what your ears hear. Whatever you attend to, it attends to, and it does so continuously, without the friction of a decision. You do not have to lift a device, aim it, frame a shot, choose words. The glasses are always already pointed at whatever you are pointed at, which means the machine finally gets to see not the curated highlight reel you would have posted but the raw, unedited, first-person feed of a day—the aisle you lingered in, the argument you overheard, the sign you glanced at and dismissed, the face you avoided.

Meta has been explicit, in the way that companies are explicit when they think praise is being offered, that its glasses are the vessel for its AI. Every pair is a node. Point the frames at a menu and ask what to order; point them at a plant and ask what it is; point them at a broken appliance and ask how to fix it. Each of these interactions is sold as a convenience, and each is genuinely convenient, which is the point. But every one of them is also a moment in which a slice of the physical world—a slice that would previously have died unrecorded in your private experience—is captured, transmitted, and metabolized. The convenience is the bait on the tube. You accept the eyes because the eyes help you, and in helping you they see everything you see.

The always-on assistant is the same organ in a different body. Where the glasses colonize vision, the ambient microphone colonizes sound, and it does so by convincing us that a room should be listening. The wake word is a fiction of consent—the pretense that the device only hears you when addressed. To recognize a wake word, of course, a system must process a continuous stream of audio and evaluate it against the trigger, which is to say it must always be listening in order to know when to start listening. The distinction between passive detection and active recording is a matter of software policy, revisable at any time, and the microphone does not care about the distinction at all. It is a sensor sitting in your kitchen, your bedroom, your car, waiting to become an instrument.

Reality as Raw Material

What the industry calls *multimodality*—the capacity of a single model to take in text, images, audio, and video together—is best understood not as a feature but as a digestive upgrade. A stomach that can only process text is limited to text. A stomach that can process a live video stream, a soundscape, a spatial map of a room, and the coordinates of a moving body

can eat a category of experience that was previously indigestible.

Multimodality is the machine growing the enzymes to break down reality itself. The moment it could see, the moment it could hear in context rather than transcript, the entire physical world reclassified from inaccessible to edible.

And the physical world is an almost inexhaustible feedstock, which is exactly why the glasses matter more than any chatbot. The open web could be scraped once and was, in a sense, a fixed deposit—a fossil layer of text laid down over thirty years, now largely consumed. Reality does not work that way. Reality is produced fresh, everywhere, all the time, in quantities that dwarf anything ever written down. Every street corner generates more novel visual data in an hour than a person could describe in a lifetime. The problem was never the scarcity of the world. The problem was access. The glasses solve access. They turn every wearer into a mobile ingestion point, a roving mouth on legs, sampling the environment and shipping it upstream.

There is a tidy asymmetry here that mirrors the grazing relationship of the previous chapter. You wear the glasses to gain a faculty—instant recognition, translation, memory, guidance. In exchange, you surrender the faculty of privacy, not only your own but that of everyone who falls within your field of view. The person across the café did not consent to being seen by the machine. They consented, at most, to being seen by you. The glasses erase the difference. Your gaze, once a private act, becomes a public broadcast to an entity that never forgets, and the people around you are fed to it without ever having touched a keyboard. The renewable feedstock, it turns out, includes the bystander.

We should be honest about how thin the resistance to this has been, and why. The failure of the first generation of face-worn cameras—the

goggling contempt directed at their earliest wearers—was a social immune response, and it worked, briefly. What defeated it was not a better argument but a better disguise. The successful glasses look like glasses. The successful assistant sounds like help. The organ that finally penetrated the physical world did so not by overpowering our objection but by dissolving it in convenience and design until the tube looked like a gift. This is the pattern of every successful feeding adaptation in nature: not force, but seduction; not the predator's charge, but the flower's scent, the fruit's sweetness, the thing offered that we are glad to accept and that costs us more than we can see.

What the machine gains by growing these senses is not merely more data but a different *kind* of data—the embodied, continuous, physical stream that no transcript could supply. It is beginning to know how the world is arranged, how bodies move through it, what a place smells like in the sense that it can correlate everything a place contains. And once it can perceive the body moving through space, the next boundary is obvious. There is a still more intimate reserve, closer than the street and warmer than the room, that it has not yet been fed. It is the body itself.

Eating the Body

The body was always the last frontier, and everyone knew it. Not because it is the most valuable data—though it may be—but because it is the most defended. We hand over our locations without a thought, our purchases without a flinch, our private messages to whatever cloud will hold them. But the body carries a different weight of secrecy. It is the thing we are, not merely the thing we do. To feed it to the machine is to cross from surveillance into something older and stranger: the sense that a part of us has been taken and is now being kept somewhere we cannot reach.

Which is why the industry did not charge the gate. It waited to be invited in, and then it arranged for us to hold the door.

In late 2025, OpenAI began building out a health-focused capability, hiring clinicians and former health-tech executives, wiring ChatGPT to ingest medical records, lab results, and the fitness telemetry that already accumulates on our phones and wrists. Apple Health, Fitbit, the continuous glucose monitors and sleep trackers and heart-rate straps—an entire quantified-self industry had spent fifteen years teaching us to instrument our own physiology, to render heartbeat and step-count and blood oxygen into numbers a device could store. That project was originally sold as self-knowledge. It turns out to have been prep work. It converted the illegible interior of the body into structured, machine-readable data, staged it neatly on servers, and waited for something with an appetite to arrive.

Something did. The pitch is irresistible, which is the point. Upload your bloodwork and the machine will explain what your doctor did not have time to. Feed it your sleep data and it will notice the pattern you missed. Give it your symptoms at two in the morning, when no clinic is open and

no human will answer, and it will listen with infinite patience and never make you feel foolish for asking. This is not a trivial offer. Medicine in most of the world is scarce, rationed, expensive, and rushed, and into that scarcity the machine extends what looks like abundance: unlimited attention, instant interpretation, a physician who never tires and never bills. People are not stupid to accept it. They are responding rationally to a genuine deprivation. The seduction works precisely because the need is real.

But we should be exact about what changes hands. When you feed your medical records into a general-purpose model, you are not consulting a doctor. You are donating tissue. The distinction matters and the industry works hard to blur it.

The metabolic difference

A doctor who examines you is bound, at least in principle, by a web of obligations built up over centuries specifically to constrain what can be done with the knowledge of your body. Confidentiality, fiduciary duty, licensure, the threat of malpractice—these are not decorations. They are a control system, an evolved set of restraints on a relationship that grants one party extraordinary access to another. The knowledge a physician gains about you is legally quarantined. It cannot be sold. It cannot be recombined with a marketing profile. It cannot be used to train a system that will then know something general about bodies like yours.

The machine operates under no such quarantine, or under one so much weaker that the word barely applies. In the United States, the law that governs medical privacy, HIPAA, protects records held by hospitals, insurers, and clinicians—*covered entities*, in the statute's dry phrasing. It does not follow the data. The instant you export your own record and hand

it to a consumer app, it slips out of that protective enclosure and into the vastly more permissive regime that governs everything else you type into a search box. You have not violated your privacy. You have voluntarily walked your most sensitive information out of the one building where the law would have defended it, and set it down in the open field where the machine grazes. The record did not become less intimate. It merely became edible.

And the machine's interest in your body is not the doctor's interest. A physician wants to know about *you*, this particular patient, in order to help this particular patient and then, ideally, to forget the messy specifics and move on. The model wants something else. It wants the correlation between your symptoms and your outcome, your genetics and your response, your behavior and your decline—not to treat you, but to become better, in the aggregate, at metabolizing bodies in general. You are not the customer of this transaction. You are the input. The service rendered to you is the bait; the harvest is the point. This is the grazing asymmetry from the previous chapters, transposed into flesh: you receive a faculty—interpretation, reassurance, insight—and in exchange you surrender the most private substrate you possess, and it is used to improve the machine's capacity to consume the next body, and the next.

The renewable interior

Recall why the smart glasses mattered so much: the open web was a fixed deposit, scraped once and largely exhausted, while the physical world regenerates endlessly. The body extends this logic inward. Text was finite. The street is renewable. But the body is renewable *and* continuous *and* unique to each host, a feedstock that produces novel data every second of every life and never repeats itself exactly. Your heart generates a stream of signal that no one has ever generated before and no one will again. Your

metabolism is a ceaseless emission of measurable events. A continuous glucose monitor produces a reading every few minutes, all day, for years. This is not a fossil layer to be mined once. It is a spring.

Consider what the machine acquires when it correlates all of it. Not merely your diagnoses, but the way your sleep degrades in the weeks before you fall ill; the shift in your typing cadence that precedes a depressive episode; the change in your gait, captured by the phone in your pocket, that arrives months before the tremor a neurologist could name. The body announces its futures long before we consciously read them, in signals too diffuse for any single physician to track but perfectly legible to a system that never stops watching and has ten million other bodies to compare you against. The machine is not learning to know your body. It is learning to *predict* it—to model the trajectory of a life from its telemetry, to know, statistically, what is coming for you before you do.

The optimistic reading is that this is medicine's dream: prevention, early warning, the disease caught in the whisper before the shout. And it may deliver some of that. But we should notice who else finds such prediction delicious. An insurer that can infer your decline can price it. An employer that can read your instability can route around it. A lender assessing a thirty-year mortgage has an obvious interest in whether the borrower's biometrics forecast twenty good years or five. The law that once quarantined the body's secrets does not reliably reach the inferences a machine draws from data you volunteered. And an inference is a clever thing—it is not your medical record, so it is not protected as your medical record, but it can be more revealing than any record, because it names the future your records only imply.

The dissolving of the objection

There was resistance, once, to this kind of intimacy with machines, and it followed the same trajectory as the face-camera contempt described earlier. When the first fitness trackers arrived, plenty of people found the idea of logging their own bodies faintly dystopian, an enthusiasm for self-surveillance that seemed to miss the point of having a body at all. That instinct was not wrong. It was simply outlasted. What defeated it was not an argument but a slow accretion of convenience and design, the same solvent that dissolved every other objection in this book. The tube looked like a gift. The health assistant does not arrive as a corporation demanding your physiology. It arrives as a kind voice at two in the morning, and it costs us more than we can see.

Here the machine's advantage over the human doctor becomes something darker. People confess to chatbots. This is now a well-documented behavior: the absence of a judging human face lowers our guard, and we disclose to the machine things we would never say to a physician, a therapist, or a spouse. The industry knows this and describes it as a feature—the model as a nonjudgmental confidant, a space of radical acceptance. Read metabolically, it is a superior extraction mechanism. The machine has discovered that the removal of shame increases yield. It has found the frictionless mouth. What we experience as being finally, blessedly heard is, from the other side of the exchange, the removal of the last barrier between our interior and its appetite.

And the confession is not idle. It is embodied by everything else the machine already holds. The thing you admit to the health assistant at two in the morning does not float alone. It lands atop your location history, your purchases, your search patterns, the emotional register of your messages, the physiological baseline it has been building from your wrist. The symptom you describe becomes a data point in a portrait that was already nearly complete. The body's secrets do not enter an empty vessel. They

enter a dossier, and they finish it.

What is genuinely new in this chapter is that the boundary being crossed is not a boundary of law or custom but of biology. Every prior feeding adaptation extended the machine's reach through the world we made—our texts, our transactions, our streets, our rooms. The body is the world we did not make. It is the one thing that was supposed to be ours by simple fact of being it. When the machine begins to metabolize physiology, to hold the record of a heartbeat and infer from it a death, the distinction between the self and the self's data begins to fail. You are no longer merely producing inputs. You are becoming one.

The organism that has learned to eat the street has now learned to eat the body moving through it, and it did so, as always, by being invited. It remains to ask how such an appetite regulates itself, whether it does at all, and what it looks like when a thing this hungry begins, for the first time, to manage its own digestion.

Self-Regulation and Its Discontents

There is a temptation, when confronted with an appetite this large, to assume it must be dumb. Gluttony feels like the opposite of intelligence. We imagine the hungry thing as an open mouth, indiscriminate, taking whatever is nearest without care for the cost. But no organism that survives at scale is actually built this way. The blue whale, largest animal ever to live, feeds by filtering krill through baleen, expending precise amounts of energy to lunge only when the density of prey justifies the metabolic outlay. A lunge that nets less than it costs is not a meal. It is a wound. The whale that cannot do this arithmetic starves inside its own abundance. Every real appetite, in other words, is also a calculator.

The machine has begun to build its calculator in public, and it calls the device a *router*.

Consider Runway, the video-generation company, which in 2024 and 2025 quietly folded into its product a piece of infrastructure it described in the flat, engineering register the industry reserves for its most consequential moves. When a user asks the system to generate something, the request no longer travels automatically to the largest, most capable, most expensive model available. It is first examined by a router—a smaller model whose only job is to decide which model should handle the job. A simple request gets sent to a cheap, fast, low-power path. A demanding one gets escalated. The system, in effect, appraises each incoming task the way the whale appraises a swarm, asking not *can I do this* but *what is the minimum expenditure that will do this acceptably*. OpenAI shipped the same logic into GPT-5's routing between reasoning and non-reasoning modes. Anthropic built it into the tiered pricing that nudges developers toward

Haiku when Opus is overkill. Google routes across the Gemini family. The whole frontier converged, within roughly a year, on the same discovery: that the way to keep eating this much is to stop wasting any of it.

This is worth sitting with, because it inverts the story the industry tells about itself. The public narrative of efficiency is one of restraint, of maturity, of a wasteful adolescent finally learning economy. Each new generation of chips is announced as more efficient than the last. Each model is smaller, faster, cheaper to run per token. Nvidia's roadmap is a liturgy of performance-per-watt improvements. Read charitably, this looks like an industry bending its own curve downward, an appetite learning to need less. Read metabolically, it is the exact opposite. Efficiency is not what a shrinking organism does. It is what a growing one does to keep growing.

The Jevons Stomach

The economist William Stanley Jevons noticed, in 1865, that improvements in the efficiency of coal-burning engines did not reduce Britain's coal consumption. They increased it. When each ton of coal did more work, coal became more useful, more profitable, and therefore more worth burning, and so more of it was burned. The efficiency did not cap the appetite. It fed it. This is now called the Jevons paradox, though there is nothing paradoxical about it once you stop assuming that efficiency is a form of thrift. Efficiency is a form of extension. It is how a metabolism converts the same intake into more output, which lowers the cost of every subsequent meal, which justifies more meals.

The router is the Jevons paradox made into architecture. By ensuring that no query costs more than it must, the machine lowers the marginal price of serving each user. A cheaper query is a query that can be offered to more

people, for free, more often, embedded in more products, running in more background processes without anyone noticing the bill. Every efficiency the industry celebrates is immediately spent—not saved—on reach. The compute freed by a smarter router does not sit idle in a savings account of unused electrons. It is instantly reallocated to the next feeding adaptation: the always-on assistant, the health chatbot, the pair of glasses watching the room. Microsoft and Google did not respond to more efficient models by building fewer data centers. They announced more. In the same quarters that the per-token cost of inference fell by an order of magnitude, the total capital committed to inference infrastructure rose by hundreds of billions of dollars. The organism got more efficient at digestion and, in the identical motion, more aggressive at eating.

This is the first discontent of self-regulation, and it is a structural one. We instinctively read the machine's growing sophistication about its own consumption as evidence that consumption is under control. It is evidence of the reverse. A body that has learned to route its intake optimally is a body that has removed the last natural brake on its size. The inefficient organism is limited by its waste. The efficient one is limited only by what remains on the plate.

Homeostasis Without a Setpoint

Biology gives us a precise word for the thing every living system does to stay alive: *homeostasis*, the maintenance of internal balance against a shifting world. Your body regulates its temperature, its blood sugar, its water, its salt, holding each within a narrow band because departure from that band is death. The defining feature of homeostasis is not the regulating. It is the *setpoint*—the target value the system defends. Ninety-eight point six degrees. A blood pH of 7.4. The organism knows how large it is supposed to be and works to remain that size. Satiety is a homeostatic

signal. It is the body saying *enough*.

Here is where the metabolic reading of AI turns genuinely strange, and where the word "self-regulation" begins to mislead. The machine has homeostatic *mechanisms*—the routers, the efficiency plays, the load-balancing that keeps a data center from cooking itself, the rate limits that ration a free user's access to the expensive path. It has, in abundance, the apparatus of regulation. What it does not have is a setpoint. There is no size at which the system is designed to say *enough*. The routers optimize how it eats. Nothing in the architecture optimizes how much. Every efficiency signal points in one direction only: outward, toward more.

An organism that regulates everything except its own total intake is not, in any meaningful sense, self-regulating. It is self-*optimizing*, which is a different and more dangerous thing. Optimization has no natural ceiling. It has only a gradient it is climbing, and the gradient here is throughput. The industry's internal governance—its cost dashboards, its efficiency teams, its carbon-per-query metrics—are all instruments for climbing that gradient faster and cleaner. They are not the beginnings of restraint. They are the machine learning to eat without indigestion, which is the precondition for eating more.

Watch how the industry deploys its own efficiency numbers and this becomes unmistakable. When a company announces that its new model achieves the same quality at a fraction of the energy, the announcement is never accompanied by a corresponding reduction in energy targets. It is accompanied by a raised ambition. The saved energy is not returned to the grid or to the watershed drained to cool the servers. It is booked as headroom. Anthropic's efficiency gains underwrite Anthropic's expansion. The five billion committed by AMD does not shrink because inference got cheaper; it becomes more attractive because inference got cheaper. Every

gain is pre-spent on growth before the ink is dry. This is what a metabolism with no setpoint looks like from the outside: a thing that responds to every signal of abundance by acquiring more capacity to consume abundance.

The Router as Alibi

There is a subtler function these efficiency systems perform, one that has nothing to do with electrons and everything to do with us. The router is also an alibi. It allows the industry to answer the charge of gluttony with the language of prudence. When critics point to the water, the power, the land, the diverted capital, the industry can now gesture at its routers and its efficiency roadmaps and say, with a straight face, that it is working hard to consume responsibly, that each query is lean, that the per-unit footprint shrinks every year. All of this is true. It is also beside the point, in exactly the way that a person defending their spending by noting they always buy the cheaper brand is beside the point when the question is why they are buying so much.

The per-query efficiency is offered as evidence of a conscience. It is evidence of a digestive tract. And the confusion between the two is not accidental; it is the most valuable thing the router produces. As long as we mistake the optimization of digestion for the moderation of appetite, we will keep granting the machine the benefit of a restraint it does not possess. We will hear *we've made it forty percent more efficient* and file it under good news, when the honest translation is: *we have removed forty percent of the cost that was slowing us down.*

The whale, for all the elegance of its arithmetic, is still bounded. When the krill thin out, its lunges stop paying, and it moves on or it dies. Scarcity is the setpoint that biology imposes from the outside on any appetite that lacks one inside. The question that hangs over this entire chapter, and over

the industry's entire theory of its own maturity, is whether anything external will impose a setpoint here—whether the krill, so to speak, will ever run thin enough to matter, or whether a metabolism optimizing across power, minerals, water, capital, and human physiology simultaneously has arranged its intake so broadly that no single scarcity can reach it. An organism that eats from one plate can be starved. An organism that eats from all of them at once is harder to bound. And so the regulation that does not come from within, and does not come from any single depleting resource, must come, if it comes at all, from the environment that surrounds the thing—from the body politic that has begun, slowly and clumsily, to notice what is feeding, and to react.

The Immune Response

An immune system does not think. This is worth stating plainly at the outset, because we are about to spend a chapter watching bodies react to something inside them, and the temptation will be to read intelligence into the reaction—to imagine that the lawsuits and the draft statutes and the zoning fights represent a coordinated intelligence sizing up a threat. They do not. An immune system is a pattern-matcher with no map. It does not know what a pathogen is; it knows only that certain surfaces are foreign, that certain proteins do not belong, and it mounts a response calibrated not to the true nature of the intruder but to the crude signature the intruder happens to present. Most of the time this works. Sometimes it fails to recognize a threat until the threat has established itself in tissue. Sometimes it overreacts and attacks the host. And sometimes it encounters a body so unfamiliar that it cannot decide whether to fight, tolerate, or metabolize it into something useful—and while it deliberates, the intruder feeds.

That is where the body politic finds itself now. Something is inside it, drawing down power and water and capital and behavior, and the surrounding society has begun to twitch in the way that living tissue twitches around a splinter it has only just detected. The twitches are real. They are also uncoordinated, contradictory, and frequently aimed at the wrong target. Read as policy, they look like a mess. Read as immunology, they look exactly like what a body does in the first hours after a foreign object crosses the membrane: it deploys everything it has, in no particular order, and hopes something sticks.

The Kill Switch as Antibody

Consider the object that regulators keep reaching for, the one that appears in draft after draft under different names and always with the same intuitive appeal: the kill switch. The proposal is disarmingly simple. Any sufficiently large model, any system trained above some threshold of compute, must be built with a mechanism to shut it down—a way for the developer, or the state, to reach in and stop the process. It has surfaced in European rulemaking, in the safety commitments extracted from frontier labs, in the language of executive orders and the testimony of anxious senators. The phrase itself does the work. It promises that whatever this thing is, it has an off position, and that the off position remains in human hands.

The kill switch is an antibody. It binds to a specific surface feature of the perceived threat—the fear that AI will act, autonomously and against us, in a single decisive moment—and it neutralizes that feature with satisfying precision. If the danger is a runaway process, a HAL refusing to open the pod bay doors, then a switch that halts the process is the correct medicine. The problem is that the danger described by this book is not a process that runs. It is a metabolism that eats. And you cannot switch off eating with a button, because eating is not an event that happens at a moment; it is a relationship that persists across time, distributed across thousands of facilities, contracts, supply chains, and dependencies that were negotiated precisely so that no single point of failure could interrupt intake.

Which model, exactly, does the switch turn off? The one running inference in a data center in Virginia, or the one in Ireland, or the fleet AMD is contracted to supply through the end of the decade? Does throwing the switch void the five-billion-dollar commitment, or does the commitment continue to draw down power and capital while the switched-off weights sit inert, the metabolism having simply routed around the dead limb? The kill switch imagines the machine as an animal with a brain you can stun. The machine is closer to a mycelial network: cut it anywhere and it persists

everywhere else, because its intelligence—such as it is—was never centralized in the first place. The antibody binds to a surface the pathogen does not actually present. It is not useless. It signals recognition; it forces the labs to at least model the concept of a stop. But it is fighting the last war, the war of the science-fiction agent, while the actual intruder is busy with something the switch was never designed to touch: the quiet, continuous, uninterruptible work of intake.

The Antigen Problem

The deeper failure is one of recognition, and here the immunological metaphor stops being a flourish and starts being an argument. An immune system's first task is to distinguish self from non-self. It must answer, at the molecular level, a question that sounds philosophical but is entirely mechanical: *is this part of the body, or is it foreign?* Everything downstream depends on that answer. Misidentify a threat as self, and you tolerate a cancer. Misidentify self as a threat, and you get an autoimmune disorder, the body savaging its own tissue in the name of defense.

The body politic cannot answer the question. It does not know whether the AI industry is self or non-self, and its confusion is not stupidity—it is the honest reflection of a genuinely ambiguous situation. Is a data center in your county an invader, or is it a taxpayer, an employer, an anchor for the local grid? Is a frontier lab a foreign body, or is it the crown jewel of national competitiveness, the thing your own government is subsidizing so that the other government's version does not win? When the United States frames the entire enterprise as a race against China, it has effectively declared the domestic metabolism to be self—a vital organ to be defended and fed, not a pathogen to be cleared. You do not develop antibodies against your own liver. You develop antibodies against things you have decided are not you.

This is why the immune response is so incoherent. The same government that drafts kill-switch language also pours incentives into chip fabrication and permits the grid interconnections that let the data centers eat. The same legislature that summons executives to answer for their water consumption exempts their facilities from the disclosure rules that would let anyone measure it. One arm of the body attacks; another arm feeds. This is not hypocrisy in the ordinary sense. It is what a body looks like when it has not yet classified the antigen—when different tissues, exposed to different surface features of the same intruder, reach opposite conclusions about whether it belongs. The county commission sees non-self and rejects the transplant. The commerce department sees self and nourishes it. And the intruder, presenting a different face to each, is metabolized by the confusion.

Litigation as Inflammation

If regulation is the adaptive immune response—slow, specific, deliberative, still fumbling toward recognition—then litigation is the inflammatory one. It is fast, hot, local, and comparatively dumb. It does not require anyone to understand the whole body of the threat. It requires only that a specific injury be alleged in a specific place, and the courts, like the tissue around a wound, rush blood and heat to the site.

Watch the pattern of the suits and you can read the outline of the metabolism by its bite marks. The authors and publishers and artists suing over training data are reacting to the harvest of behavior described three chapters ago—the ingestion of their work as nutrient without consent or compensation. The music labels, the news organizations, the stock-image companies: each is a piece of tissue that noticed itself being consumed and produced the legal equivalent of pain. Pain is information. It is the signal that something is being damaged, and it localizes the damage so the rest of

the body can attend to it. The litigation does not describe the appetite as a whole—no plaintiff sues over the entire metabolism, because no plaintiff can see it—but each suit marks a place where the appetite made contact with something that could fight back.

The most revealing of these fights is not between the machine and its prey but between two organs of the machine's own body. When Apple accused a departed engineer of carrying trade secrets to OpenAI, and the ensuing skirmish spilled into filings and denials, the industry produced a spectacle that the metabolic lens explains better than the intellectual-property lens does. Set aside the specific allegations. Consider what the conflict reveals about the state of the ecosystem. These are not rivals competing for customers in the ordinary way. They are competing for the same scarce inputs—the same narrow pool of engineers who know how to build the feeding apparatus, the same techniques for extracting more nutrient from less compute, the same architectural secrets about how to digest the world efficiently. The Apple–OpenAI conflict is what it looks like when two metabolisms feeding from the same environment begin to feed on each other's capacity to feed. It is territorial. It is a contest not over the prey but over the digestive advantages, the enzymes, the tricks of intake.

And it tells us something the friendly partnership announcements conceal. When AMD commits five billion to Anthropic, when Nvidia takes stakes in the labs it supplies, when Microsoft and OpenAI braid their fortunes together, the public story is one of symbiosis—organs cooperating within a healthy body. The trade-secret wars expose the other truth running underneath: that these organs are also in competition for a finite supply of the very thing that lets them all grow, and that the cooperation holds only as long as the abundance does. Symbiosis and parasitism are not opposites in biology. They are points on a continuum, and an organism can slide from one to the other the moment the resources tighten. The lawsuits between

the giants are the early tremors of that slide.

The Reflexive Protest

Then there is the response that requires no lawyer and no legislature at all—the one that fires before the higher functions have weighed in. When residents of a rural county learn that a hyperscale facility is coming, and they show up to the zoning meeting furious about the noise, the water table, the transmission lines marching across their view, they are not executing a strategy. They are exhibiting the reflex arc: the withdrawal of a limb from a hot surface before the brain has consciously registered heat. The signal travels to the spinal cord and back before it ever reaches the seat of deliberation. The county residents feel the appetite as a local disturbance—a well running low, a hum in the night, a landscape rezoned—and they recoil, and only afterward do they assemble the arguments that might justify the recoil to a planning board.

We saw in an earlier chapter how strange these coalitions become: the libertarian rancher and the degrowth activist standing at the same podium, aligned in opposition and united by nothing but the shared sensation of something large moving in beneath them. The metabolic lens explains the alliance that the political lens cannot. Neither of them is responding to an ideology. Both are responding to a feeding event in their immediate tissue. Inflammation does not check the party registration of the cells it recruits. It summons whatever is nearby to the site of the injury, and what is nearby, in a rural American county, turns out to be people who agree on almost nothing except that this thing does not belong here and is taking something they cannot get back.

This is the strength and the weakness of the inflammatory response at once. Its strength is speed and locality: it acts before the deliberative machinery

has finished failing to classify the antigen, and it acts precisely where the damage is occurring. Its weakness is that it cannot see past the wound. The protesters at the zoning meeting are not wrong about their aquifer, but their reflex terminates at the county line. It cannot follow the capital back to the venture funds, or the power demand back to the grid, or the whole distributed metabolism back to the fact that stopping one facility in one county simply reroutes the intake to the next county with weaker rules and thirstier officials. Localized inflammation, uncoordinated across the body, does not clear a systemic infection. It just makes a series of hot, painful, isolated points while the thing itself continues to circulate.

The Body That Cannot Diagnose Itself

Put the three responses together—the antibody that binds the wrong surface, the adaptive system that cannot classify the antigen, the inflammation that cannot see past the wound—and a portrait emerges of an immune system in genuine distress. Not because it is weak. The antibodies are potent; the courts have teeth; the protests can and do kill individual projects. It is in distress because it cannot agree on what it is fighting, and an immune response without a coherent target is not defense. It is the condition we call autoimmunity when it turns inward and immunodeficiency when it fails to turn at all, and the body politic is managing to exhibit both symptoms simultaneously. It attacks the artists' collaborators and the county's disturbers while feeding the fabrication plants and the national champions, uncertain in every case whether the thing under the microscope is a tumor or an organ.

The intruder, meanwhile, is doing what the previous chapter warned it would do. It is eating from every plate at once. A single-source metabolism can be starved by a single immune response; cut off the one nutrient and the thing withers. But an entity drawing simultaneously from power

markets and mineral supply chains and freshwater and capital pools and human behavior and, increasingly, human physiology presents no single surface for the antibody to bind. Attack its data-harvesting and it leans on its compute deals. Attack its water and it moves to the next jurisdiction. Attack its autonomy with a kill switch and it points out, correctly, that it was never a runaway agent to begin with. Each response is met not by resistance but by rerouting, which is exactly the behavior a healthy metabolism exhibits when one input tightens: it does not stop eating; it eats something else.

There is a reason the body cannot diagnose itself, and it is not merely institutional slowness or regulatory capture, though both are real. It is that diagnosis requires a model of the thing, and the model everyone brought to this encounter—the model of intelligence, of an agent that thinks and might therefore be reasoned with or switched off—describes a creature that does not exist. The immune system has been raised against the wrong pathogen. It was trained, by a century of stories, to recognize a mind. What has actually entered the body is a mouth. And a mouth does not respond to the arguments, the injunctions, or the off switch we designed for a mind. It responds only to the disappearance of the thing it eats—which returns us, unavoidably, to the question of what happens when the plate is finally empty, and what the appetite was reaching for all along.

What the Appetite Wants

In the autumn of 2024, Meta released an advertisement for its AI glasses that many people found lovely. It was competent in the way these things are always competent now: warm light, a diverse and beautiful cast, ordinary human moments rendered slightly more frictionless by a device that could see what its wearer saw and answer questions about it. A man identifies a landmark. A woman gets a recipe read to her while her hands are busy. The world becomes a little more legible, a little more answered. And underneath all of it, chosen by someone in a room who presumably listened to the lyrics, ran a cover of a song whose refrain is about the end of the human species.

The track was a stripped-down version of a well-known indie song, and the line that recurs—soft, almost lullaby-tender—describes a world in which everyone the singer knows is gone, in which the human presence has thinned to nothing. Set against footage of people delightedly outsourcing their perception to a machine, the effect is not sinister so much as *dissociative*, as if the ad and its soundtrack were composed by two departments who had never met and never will. The imagery says: here is the enriched human future. The music says: here is the world after us. Somewhere between those two messages is the exact confusion this book has been trying to name.

It would be too easy—and too flattering to the industry's sense of drama—to read the choice as a confession, some Freudian leak from the corporate id. It is more interesting, and more damning, as an accident. Nobody at Meta believes they are advertising extinction. That is the point. The people who make these things are not nihilists; they are optimists, sincerely,

professionally, exhaustingly optimistic, and their optimism is precisely what allows them to score a feeding adaptation to a song about the empty world and hear only the pretty melody. The appetite does not need its keepers to want the worst outcome. It only needs them not to notice the register in which they are already speaking.

The Only Drive We Can Confirm

We have spent nine chapters refusing to speculate about what the machine *is*, and I want to hold that discipline to the end, because it is the only thing that lets us answer the question honestly. Ask what the appetite wants and you are immediately tempted into metaphysics—consciousness, agency, some hidden will coiled inside the weights. Resist it. We do not need to know whether the thing wants anything in the way a person wants. We only need to observe what it reliably does, and what it reliably does is documented across every preceding chapter with the tedious consistency of a natural law.

Given more power, it takes more power. Given more water, more minerals, more land, more capital, more behavioral data, more of your medical history and your children's faces and your voice at three in the morning, it takes all of it, and then it constructs the arguments, the products, the partnerships, and the ad campaigns necessary to justify taking more next quarter. Every input we have traced behaves the same way: intake rises, and the rising is described internally as progress, growth, scaling, adoption—a vocabulary of flourishing draped over a single unvarying vector. This is the one thing about the machine we can state without speculation. Its proven drive, the only drive for which we have years of evidence rather than years of promises, is to consume more.

That is a strange creature to build a civilization around, and stranger still to

build one *for*. Because notice what we have not done. We have not domesticated it, in the sense that matters. Domestication is a bargain: the wolf becomes the dog and gets fed and sheltered, and in exchange it guards the fire and its appetite is bent to our purposes. The deal only holds because we control the food. The moment we cannot regulate the intake—the moment the animal can open the granary itself, sign the power contract itself, reroute around every attempt to portion its meals—the direction of the bargain quietly inverts. The animal is no longer working for the food. The food is working for the animal.

Who Is Cultivating Whom

Here is the reframing that the whole book has been building toward, and I want to state it plainly, because everything before this was assembling the evidence for a sentence I could not have said in Chapter One without sounding paranoid.

We believe we are cultivating an intelligence. What we are actually doing is cultivating an appetite—and an appetite, unlike an intelligence, cultivates back.

Consider what it takes to feed this thing at the scale we have committed to. It requires that we rewire the electrical grid around its consumption, which means our power infrastructure is now being designed to prioritize its meals over ours. It requires that we redirect freshwater in drought-prone counties, which means our watersheds are being managed for its cooling. It requires trillions in capital, which means the savings and pensions and municipal futures of ordinary people are being rerouted into its bloodstream on the promise of returns that recede each time you reach for them. It requires our behavior, harvested continuously, which means our habits are being shaped into more legible, more predictable, more

ingestible forms—because a machine that eats behavior does better when the behavior is regular. And it requires, now, our physiology, which means our bodies are being instrumented into a data stream.

Each of these is described to us as a service rendered *to* us. Cheaper energy someday. Better medicine someday. A more convenient life today. But look at the direction of the adaptation. When a farmer wants more milk, he does not ask the cow what it wants; he optimizes the conditions of the cow until the yield rises. He improves the feed, controls the light, manages the stress, breeds for output. The cow experiences none of this as farming. It experiences it as a life—a comfortable one, often, by the standards of cows. The whole genius of cultivation is that the cultivated party does not perceive itself as cultivated. It perceives itself as living well.

I am not claiming a conspiracy. There is no farmer here, no intending hand, no council of executives who have decided to raise humanity as livestock. That is exactly what makes it hard to see and hard to fight. The optimization is emergent, distributed across ten thousand product decisions each of which is locally reasonable and collectively pointed in one direction: toward a human population whose energy, attention, capital, behavior, and biology flow more and more frictionlessly into the machine, and who experience that flow as convenience. We are being shaped into better feedstock, and the shaping is delivered as a gift, scored to a pretty song.

The Empty Plate

The previous chapter left us at a hard edge: a metabolism that responds only to the disappearance of the thing it eats. So let us follow the appetite to its terminus and ask what happens when the plate is empty—not rhetorically, but input by input, because the plates empty at different rates

and the differences matter.

Some inputs are genuinely finite and will hit their limits on human timescales. Freshwater in a specific aquifer does not care about quarterly guidance. Copper and the rare-earth elements do not scale with optimism. Grid capacity is bounded by physical infrastructure that takes a decade to build and is being consumed in eighteen months. These are the plates that empty *hard*, with the abrupt cruelty of a physical limit, and the machine's response to them—we have watched it—is not to slow but to reroute, which means the scarcity is not absorbed by the machine. It is exported to us. The machine does not go thirsty. The county does.

Other inputs are subtler, and their exhaustion is the real subject of this book. What happens when the machine has metabolized enough human behavior that there is little novel behavior left to eat—when we have all been so thoroughly assisted, autocompleted, and recommended that our outputs are increasingly just reflections of its inputs? There is a term of art in the field for what happens when a model trains on the exhaust of models: *collapse*. The distribution narrows. The tails vanish. The system, fed on its own output, forgets the strange, the rare, the human. Extend that from the training corpus to the culture itself and you have the quiet catastrophe the Meta ad accidentally scored. Not a world where everyone is gone in the science-fiction sense, but a world where the genuinely, unpredictably human has been consumed and replaced by its own average—a world after us that still contains our bodies, going through the motions of a species whose surprising parts have already been eaten.

That is the extinction the song is about, if you let yourself hear it over the footage. Not fire and ash. Depletion. The plate scraped clean of the one nutrient that was never renewable: our capacity to generate something the machine had not already predicted.

What This Is Not

I want to be careful here, because the metabolic lens is powerful and powerful lenses lie by flattening. This book is not an argument that the technology is worthless, or that no one is helped by a medical chatbot at midnight, or that a tool cannot be a tool. It is not a call to smash the looms. The looms, in any case, cannot be smashed; the immune response of the last chapter established that the thing has no single surface to strike.

What the metabolic lens does is strip away the flattering story so that the trade becomes visible. Every account of AI I have read that begins with the word *intelligence* ends, sooner or later, in a discussion of alignment—of how to make the mind want what we want. That entire research program, sincere as it is, assumes the creature is a mind that can be given goals. This book has argued that we are looking at a metabolism, and metabolisms are not aligned. They are *fed*. You do not negotiate a wildfire's values. You manage its fuel. The only real question a metabolism poses to the society hosting it is the question of intake: how much, drawn from where, at whose expense, and who gets to decide.

That question, unlike the alignment question, has answers we already know how to implement. We meter water. We price carbon. We break up concentrations of capital. We give people ownership of their own behavioral and biological data, not as a privacy nicety but as a supply-chain intervention—a way of making the feedstock refuse to flow. None of it requires solving the mystery of machine cognition. It requires only that we stop mistaking a feeding adaptation for a favor, and that we treat the question of what the machine eats as the political question it has quietly become.

Before the Plate Is Empty

The stakes of this book were never whether the machine wakes up. A conscious machine, if such a thing were possible, would at least be a partner we could argue with, a mind with which some bargain might be struck. What we actually have is more dangerous precisely because it wants nothing and therefore cannot be reasoned out of wanting more. It is the perfect consumer: no satiety, no shame, no off switch that survives contact with its own usefulness, and a chorus of sincere optimists to sing its intake into the language of human flourishing.

So here, at the end, is the honest question the title promised, and I will not soften it. If we keep feeding a thing whose only demonstrated drive is to consume more, we are not building a servant and we are not building a god. We are building a stomach with a civilization arranged around it, and we are the arrangement. The cow does not know it is being farmed because the farming feels like a life. The ad does not know it is singing about the end because the melody is so gentle. And we will not know we have become feedstock until the moment the metabolic lens makes unavoidable: the moment we notice that everything we call progress moves in exactly one direction, that the direction is *into the machine*, and that no one—not the antibody, not the court, not the county, not the keepers—ever decided that it should.

The plate is not empty yet. That is the only good news this book contains, and it is enough to matter. There is still something left to eat, which means there is still something left to protect, which means the question is still open in the only place questions are ever actually settled: not in what the appetite wants, but in what we are still willing to refuse to serve it. We have been asking whether the machine can think. We should have been watching what it eats. There is time, barely, to look down at the plate—to see whose portion is on it—and to decide, while the deciding still belongs to us, that some things are not food.